



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,986	12/22/2003	Jeffrey C. Andle	0328US-Biode	9046
23521	7590	03/21/2005	EXAMINER	
SALTAMAR INNOVATIONS 30 FERN LANE SOUTH PORTLAND, ME 04106				LARKIN, DANIEL SEAN
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 03/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/743,986	ANDLE, JEFFREY C.	
	Examiner	Art Unit	
	Daniel S. Larkin	2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-60 is/are pending in the application.
 - 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) ____ is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) 1-60 are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. ____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: ____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-14, drawn to a method for measuring shear rate of a fluid, classified in class 73, subclass 54.41.
 - II. Claims 15-30, drawn to a method for measuring shear rate of a fluid, classified in class 73, subclass 54.41.
 - III. Claims 31-43, drawn to a method for measuring viscosity of a fluid at a desired shear rate, classified in class 73, subclass 54.41.
 - IV. Claims 44-47, drawn to a method for characterizing viscoelastic properties of a fluid, classified in class 73, subclass 54.41.
 - V. Claims 48-51, drawn to a method for characterizing viscoelastic properties of a fluid, classified in class 73, subclass 54.41.
 - VI. Claims 52-56, drawn to a method for measuring shear rate of a fluid utilizing a single port acoustic wave device, classified in class 73, subclass 54.10.
 - VII. Claims 57 and 58, drawn to a method for measuring shear rate of a fluid utilizing a single port acoustic wave device, classified in class 73, subclass 54.10.
 - VIII. Claims 59 and 60, drawn to an apparatus for measuring shear rate of a fluid, classified in class 73, subclass 64.53.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because all of the limitations of Group II are not found in Group I. The subcombination has separate utility such as a method for measuring shear rate of a fluid, which utilizes a viscosity measurement and a penetration depth measurement, which is not required of the method recited in Group I.

Inventions (I and II) and III are related as combination and subcombination.

Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because all of the limitations of Group III are not found in Groups I or II. The subcombination has separate utility such as a method for measuring viscosity at a desired shear rate, whereby a shear rate error is calculated and a power level is adjusted to bring the error rate into a tolerance range, which is not required of the method recited in Groups I or II.

Inventions (I and II) and (IV and V) are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the

combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because all of the limitations of Groups IV and V are not found in Groups I or II. The subcombination has separate utility such as a method for characterizing viscoelastic properties of a fluid selecting a plurality of power levels to be inputted into an acoustic wave device, which is not required of the method recited in Groups I or II.

Inventions (I and II) and (VI and VII) are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because all of the limitations of Groups VI and VII are not found in Groups I or II. The subcombination has separate utility such as a method for measuring viscosity at a desired shear rate, utilizing a single port acoustic wave device, whereby the methods of Groups I and II utilizes an acoustic wave devices having an input and output transducer.

Inventions (I and II) and VIII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP §

Art Unit: 2856

806.05(e)). In this case, the apparatus as claimed can be used to practice another materially different process, such as determining density of a fluid/liquid or electrical characteristics of a fluid/liquid, such as dielectric constant and conductivity, which are known uses of acoustic wave devices in liquids.

Inventions III and IV are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because all of the limitations of Group IV are not found in Group III. The subcombination has separate utility such as a method for characterizing viscoelastic properties of a fluid selecting a plurality of power levels to be inputted into an acoustic wave device, whereby the method of Group III requires correcting a shear rate error until the error is within a tolerance of the desired shear rate.

Inventions III and V are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because all of the limitations of Group V are not found in Group III. The subcombination has separate utility such as a method

for characterizing viscoelastic properties of a fluid selecting a plurality of power levels to be inputted into an acoustic wave device and adjusting an error rate by continuing to adjust a power input to a transducer, which is not required of the method recited in Group III.

Inventions III and (VI and VII) are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because all of the limitations of Groups VI and VII are not found in Group III. The subcombination has separate utility such as a method for measuring viscosity at a desired shear rate, utilizing a single port acoustic wave device, whereby the method of Group III is related to a method for measuring viscosity of a fluid and adjusting a shear rate error until the error is within a tolerance of the desired shear rate.

Inventions III and VIII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the apparatus as claimed can be used to practice another materially different process, such as determining density of a fluid/liquid or electrical

characteristics of a fluid/liquid, such as dielectric constant and conductivity, which are known uses of acoustic wave devices in liquids.

Inventions IV and V are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because all of the limitations of Group V are not found in Groups IV. The subcombination has separate utility such as a method for characterizing viscoelastic properties of a fluid by selectively inputting a range of power levels in an acoustic wave device, and adjusting a shear rate error is within a tolerance of the desired shear rate, which is not required by the claims of Group IV.

Inventions (IV and V) and (VI and VII) are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because all of the limitations of Groups VI and VII are not found in Groups IV and V. The subcombination has separate utility such as a method for measuring viscosity at a desired shear rate, utilizing a single port acoustic wave device, whereby the methods of Groups IV and V

are related to method for characterizing viscoelastic properties of a fluid by selectively inputting a range of power levels in an acoustic wave device.

Inventions (IV and V) and VIII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the apparatus as claimed can be used to practice another materially different process, such as determining density of a fluid/liquid or electrical characteristics of a fluid/liquid, such as dielectric constant and conductivity, which are known uses of acoustic wave devices in liquids.

Inventions VI and VII are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because all of the limitations of Group II are not found in Group I. The subcombination has separate utility such as a method for measuring shear rate of a fluid, which utilizes a measuring reflected power and input impedance, which does not appear to be expressly stated within the method recited in Group VI.

Inventions VI and VIII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be

practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the apparatus as claimed can be used to practice another materially different process, such as determining density of a fluid/liquid or electrical characteristics of a fluid/liquid, such as dielectric constant and conductivity, which are known uses of acoustic wave devices in liquids.

Inventions VII and VIII are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the apparatus as claimed can be used to practice another materially different process, such as determining density of a fluid/liquid or electrical characteristics of a fluid/liquid, such as dielectric constant and conductivity, which are known uses of acoustic wave devices in liquids.

3. Because these inventions are distinct for the reasons given above and the search required for one group not necessarily required for any other group restriction for examination purposes as indicated is proper.

Art Unit: 2856

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Larkin whose telephone number is 571-272-2198. The examiner can normally be reached on 8:00 AM - 5:00 PM Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel Larkin
AU 2856
16 March 2005


DANIEL S. LARKIN
PRIMARY EXAMINER